

Motorola[®] HOME Radio

S E R V I C E M A N U A L

MODELS
6F11
6F11B
 CHASSIS
HS-264

GENERAL INFORMATION

TYPE - AM Radio-Phonograph Combination

RECEIVER MODELS -

| Model | Color |
|-------|--------------------|
| 6F11 | Red-brown mahogany |
| 6F11B | Blonde |

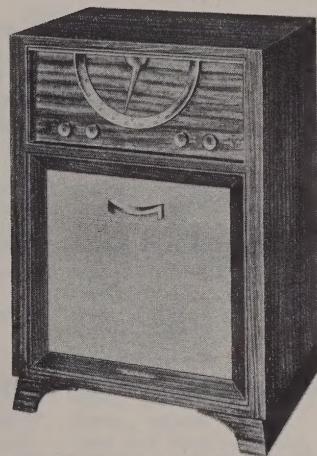
TUNING RANGE - 535 to 1620 Kc

IF FREQUENCY - 455 Kc

TUBE COMPLEMENT -

| | |
|-------|--------------------------|
| 6BA6 | RF Amplifier |
| 6BE6 | Converter |
| 6BA6 | IF Amplifier |
| 6AV6 | Detector & 1st Audio Amp |
| 6K6GT | Power Amplifier |
| 5Y3GT | Rectifier |

POWER SUPPLY - 117 volts, 60 cycle AC only; 80 watts, including phono motor



PHONOGRAPH - Model RC-37, three-speed: 33, 45 & 78 RPM. Refer to the RC-37 Service Manual for record changer service information.

INSTALLATION & OPERATING INSTRUCTIONS

ANTENNA

No outside antenna or ground is normally required for radio reception, as a loop antenna is located inside the cabinet. Two wires from the chassis connect to the loop.

In locations where additional pick-up is desired, an external antenna may be connected to the clip marked "EXT BC ANT" on the loop.

CONTROLS

Refer to Figure 1 for the locations of the radio operating controls.

Power for both the radio and the record changer is controlled by the VOL-ON-OFF knob. The phonograph motor will not operate, however, until the PHONO-RADIO knob is rotated to "PHONO".

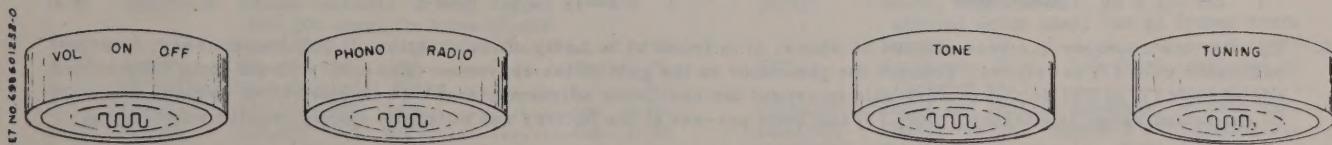


FIGURE 1. OPERATING CONTROLS

4545 AUGUSTA BOULEVARD

Motorola Inc.

CHICAGO 51, ILLINOIS

SERVICE NOTES

TO REMOVE CHASSIS FROM CABINET:

1. Remove the screws from the cabinet back.
2. Disconnect the phono power lead, the phono pick-up lead, the speaker leads, the line cord, and the antenna loop leads.
3. Remove the pointer escutcheon by pulling it downward.
4. Turn the tuning knob counterclockwise until the pointer reaches the extreme low frequency end of the dial scale.
5. From the back of the cabinet, loosen the pointer adjustment setscrew (see Figure 2), and pull the pointer and shaft assembly from the chassis. CAUTION: Do not remove the nut from the front of the pointer, as the detent ball and spring will fall out and may become lost.
6. Pull off the control knobs.
7. Remove the three chassis mounting screws, from

beneath the chassis.

8. Slide the chassis from the cabinet.

TO CALIBRATE DIAL:

1. Turn the tuning knob counterclockwise until the end of its travel is reached.
2. From the back of the cabinet, loosen the pointer adjustment setscrew (see Figure 2). CAUTION: Do not remove the nut from the front of the pointer.
3. Move the pointer until it is in a horizontal position (at the low frequency end of the dial scale).
4. Tighten the adjustment setscrew.

NOTE: If the pointer is moved by hand accidentally, it will be released from a detent in the pointer collar, and no damage to the tuning mechanism will result. To reset the pointer, move it back and forth until it again engages in the detent.

ALIGNMENT

1. Connect a low range output meter across the speaker voice coil.
2. Connect an AM signal generator as in chart below.
3. Set the signal generator for 400 cycle, 30% modulation.
4. Rotate the PHONO-RADIO switch to the "RADIO" position.
5. Turn the receiver volume control to maximum.
6. Use a small fibre screwdriver for aligning the IF and diode transformers.
7. As stages are brought into alignment, reduce the signal generator output to a level which produces less than 1.27 volts (.5 watt) across the voice coil, to avoid overloading the receiver.
8. See Figure 3 for adjustment locations, and the following chart for procedure.

| STEP | DUMMY ANTENNA | GENERATOR CONNECTION | GENERATOR FREQUENCY | GANG SETTING | ADJUST | REMARKS |
|--------------|---------------|--------------------------------|---------------------|----------------|------------------------|-----------------------------|
| IF ALIGNMENT | | | | | | |
| 1. | .1 mf | Grid of conv V-2 (pin 7, 6BE6) | 455 Kc | Fully opened | 1, 2, 3 & 4 (IF cores) | Adjust for maximum. |
| RF ALIGNMENT | | | | | | |
| 2. | .1 mf | Grid of conv V-2 (pin 7, 6BE6) | 1620 Kc | Fully opened | 5 (Osc) | Adjust for maximum.* |
| 3. | - | - | - | - | - | Connect BC loop to chassis. |
| 4. | - | Across radiation loop** | 1400 Kc | Tune in signal | 8 (Ant) | Adjust for maximum. |

5. If, after the receiver has been aligned as above, it is found to be badly off calibration, it will be necessary to adjust oscillator core (7) as follows: connect the generator to the grid of the converter tube and, with the gang fully closed, adjust core (7) at 535 kc. It is advisable to repeat the oscillator adjustments at 1620 kc and 535 kc several times until the tuning range is correct. Core (7) has been pre-set at the factory and normally should require no retuning.

* If difficulty is encountered in tuning trimmer (5), adjust trimmer (6) to 1/2 turn from tight.

** Connect generator output across 5" diameter, 5 turn loop and couple inductively to receiver loop. Keep loops at least 12" apart.

REPLACEMENT PARTS LIST

NOTE: When ordering parts, specify model number of set in addition to part number and description of part.

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6. Pull off the control knobs.
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| RF ALIGNMENT | | | | | | |
| 2. | .1 mf | Grid of conv V-2 (pin 7, 6BE6) | 1620 Kc | Fully opened | 5 (Osc) | Adjust for maximum.* |
| 3. | - | - | - | - | - | Connect BC loop to chassis. |
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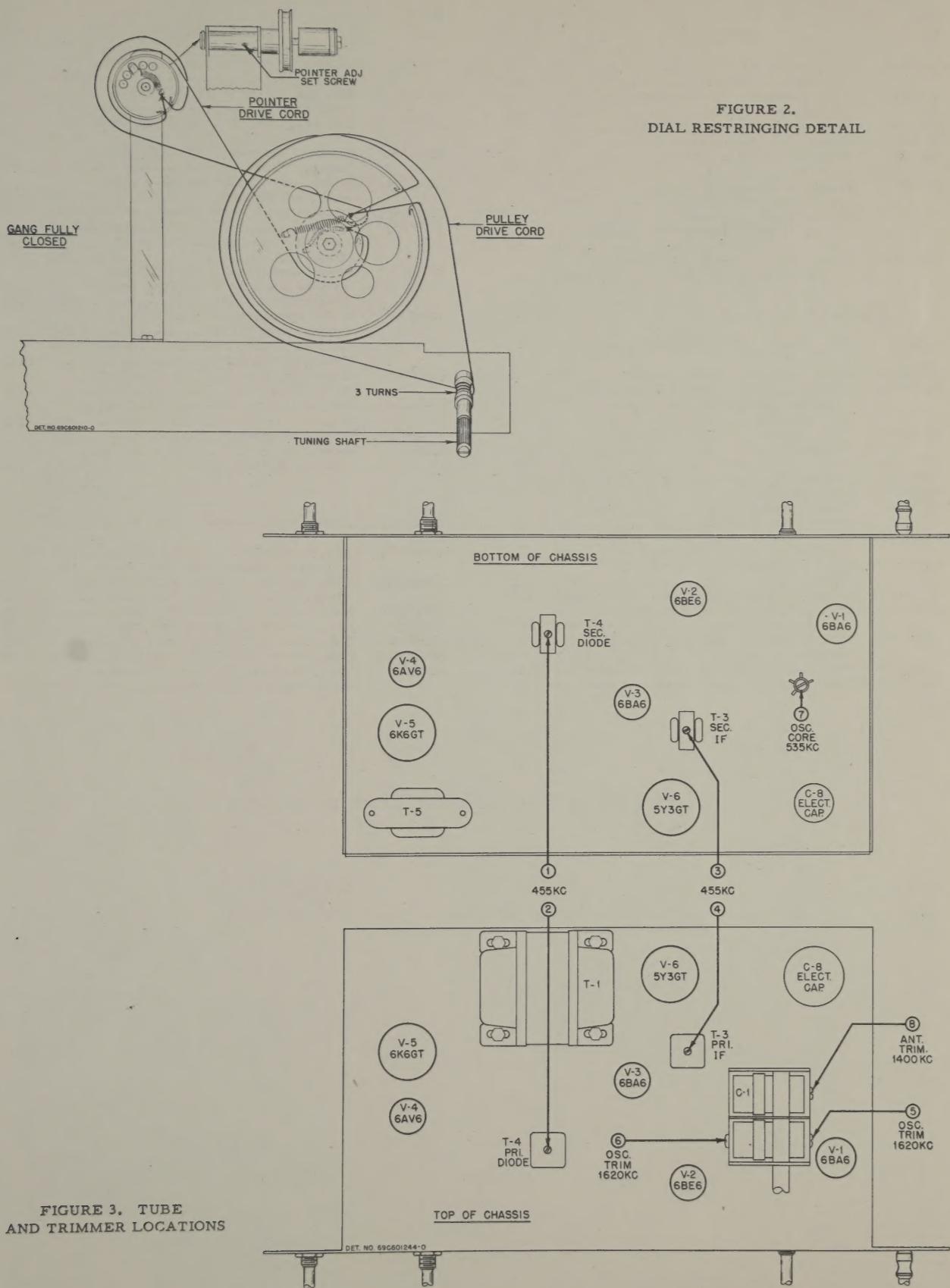


FIGURE 2.
DIAL RESTRINGING DETAIL

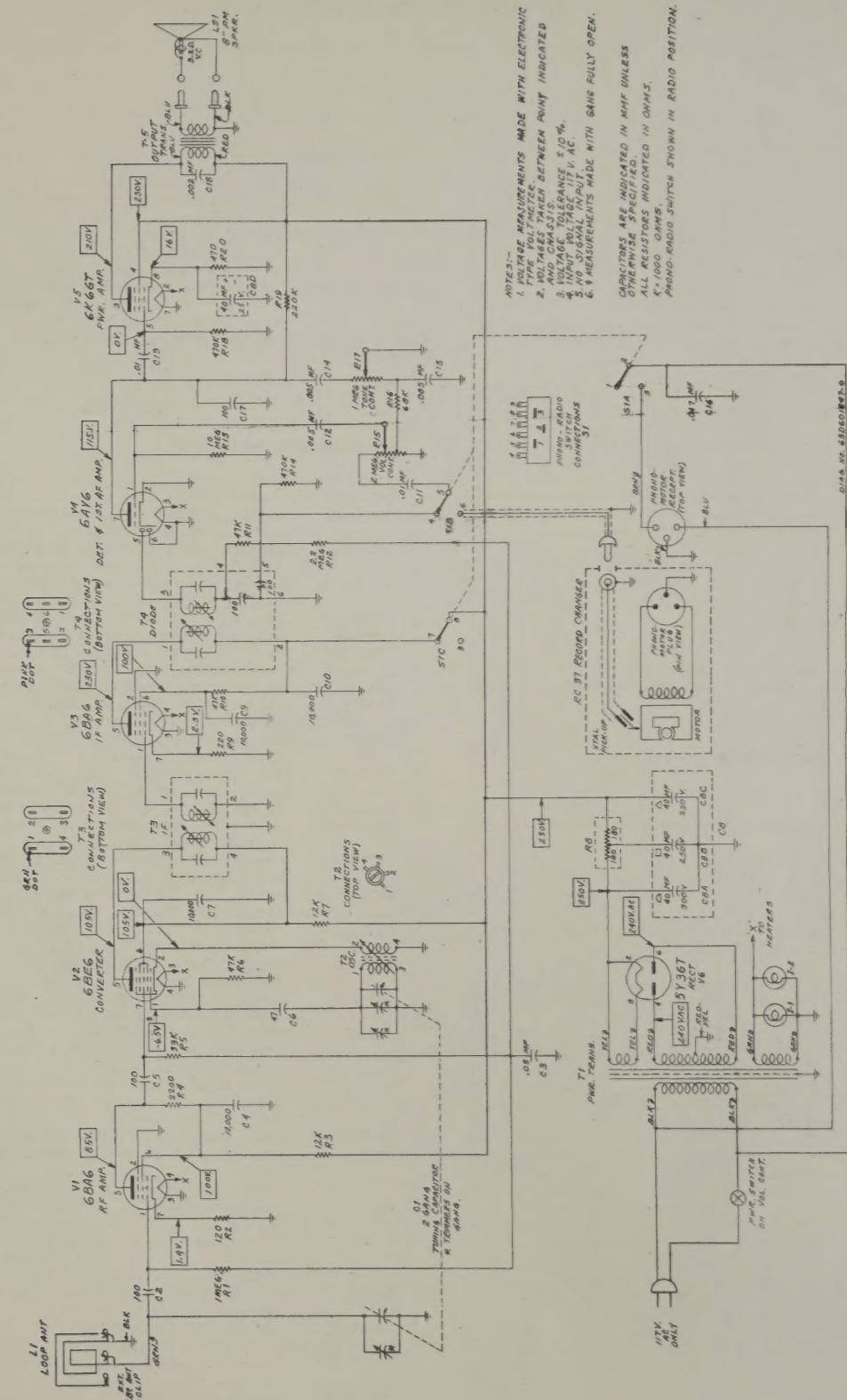


FIGURE 3. TUBE
AND TRIMMER LOCATIONS

| <u>Part No.</u> | <u>Description</u> | <u>List Price</u> | <u>Part No.</u> | <u>Description</u> | <u>List Price</u> |
|--------------------------|--|-------------------|-----------------|--|-------------------|
| 31K37494 | Strip, terminal: 4 insulated lugs, #3 gnd; 3/8" spacing..... | .10 | 4S7657 | Lockwasher ext: #8; cad pl (spkr mtg)..... | .50 |
| 31K90046 | Strip, terminal: 5 insulated lugs, #4 gnd; 3/8" spacing..... | .10 | 2S7005 | Nut, hex: 6-32 x 1/4 stl; cad pl (pointer mtg)..... | .50 |
| 29K5405 | Terminal pin (on speaker leads)..... | .05 | 2S7003 | Nut, hex: 8-32 x 5/16; cad pl (spkr mtg)..... | .50 |
| 4A70015 | Washer, "C" (tuning shaft mtg)..... | .50 | 62K70581 | Overlay, logotype: "Motorola"; gold lacquer finish..... | .40 |
| 4A21941 | Washer, "C" (holds pointer mtg shaft & pulley)..... | .50 | 1X600851 | Pointer and Collar Assembly (less shaft and sleeve)..... | .45 |
| 4S7555 | Washer, flat: 1/4 x .128 x .033 stl; cad pl (output trans mtg)..... | .50 | 55K600653 | Pull, record changer drawer: satin brass. | .95 |
| 4S7582 | Washer, flat: 1/2 x .195 x .033 stl; cad pl (pointer & gang drive pulleys mtg)..... | .50 | 3K600655 | Screw, machine: 8-32 x 1/2 cross slot head; statuary bronze finish (R.C. drawer pull mtg)..... | .20 |
| 4A691006 | Washer, flat: double "D" (pointer & gang drive pulleys mtg)..... | .20 | 3S7536 | Screw, sheet metal: #6 x 3/8 PKA slotted acorn head; antique copper finish (back cover mtg)..... | .50 |
| | | | 3K653 | Screw, speaker mtg: 8-32 x 1 1/4" copper oxide finish..... | .20 |
| MODEL 6F11 CABINET PARTS | | | 1A690738 | Shaft and Sleeve Assembly, pointer: less detent spring and ball, and pointer..... | .20 |
| 43A4326 | Ball, steel: 1/8" dia (pointer detent) doz | .15 | 55K600654 | Slide, record changer (on sides of R. C. drawer)..... | 1.25 |
| 38K691915 | Button, plug (on record changer)..... | .30 | 2S400199 | Speed nut: for .050 stud (dial scale mtg)..... | .15 |
| 16F600649 | Cabinet, console: red-brown mahogany; complete less pointer escutcheon and dial scale..... | - | 41A690732 | Spring, compression (pointer detent)..... | .15 |
| 13K600651 | Cloth, grille: 17 1/2" x 18 1/4"; mahogany..... | 2.50 | 4S1765 | Washer, flat: 1/2 x .147 x .015 stl; cad pl (pointer mtg)..... | .50 |
| 15C600874 | Cover, cabinet back..... | 1.40 | | | |
| 34K601066 | Dial scale..... | 3.95 | | | |
| 34K600817 | Escutcheon, pointer..... | .25 | | | |
| 5S7870 | Eyelet: brass (on R. C. drawer panel-holds extra spindle)..... | .15 | | | |
| 5A71081 | Eyelet, chassis mtg: plain; 9/32" long..... | .15 | | | |
| 5A600963 | Eyelet, chassis mtg: pierced; 1/8" long..... | .15 | | | |
| 5A71092 | Grommet, chassis mtg: rubber..... | .50 | | | |
| 36K601052 | Knob, control (VOL-ON-OFF): walnut-mahogany..... | .45 | | | |
| 36K601053 | Knob, control (PHONO-RADIO): walnut-mahogany..... | .45 | | | |
| 36K601054 | Knob, control (TONE): walnut-mahogany.... | .45 | | | |
| 36K601055 | Knob, control (TUNING) walnut-mahogany... | .45 | | | |
| | | | | | |
| | | | | MODEL 6F11B CABINET PARTS - Same as 6F11 except: | |
| | | | 16K600650 | Cabinet, console: blonde; complete, less pointer excutcheon and dial scale..... | - |
| | | | 13K600652 | Cloth, grille: 17 1/2" x 18 1/4"; egg shell..... | 2.50 |
| | | | 36K601058 | Knob, control (VOL-ON-OFF); tan..... | .45 |
| | | | 36K601059 | Knob, control (PHONO-RADIO); tan..... | .45 |
| | | | 36K601061 | Knob, control (TONE); tan..... | .45 |
| | | | 36K601062 | Knob, control (TUNING); tan..... | .45 |
| | | | 3K600656 | Screw, machine: 8-32 x 1/2 cross slot head; brass (R. C. drawer pull mtg)..... | .20 |

PRICES SUBJECT TO CHANGE WITHOUT NOTICE